

LONGITUDINAL TRANSLATION AT SELECTED POINTS
A MEASUREMENT TECHNIQUE REVISITED

Doren W. Hess

Scientific-Atlanta, Inc.
P. O. Box 105027
Atlanta, Georgia 30348

ABSTRACT

The extraneous signals that perturb antenna patterns can be found and identified by a method known as "longitudinal translation at selected points". The method is usually applied to certain selected angular points on the antenna pattern. With this technique the composite pattern -- consisting of the direct-path signal and the reflection signal -- is measured at a series of translation distances along the axis of the antenna range. By utilizing both the amplitude and phase of the received signal, one can remove the signal that results from stray reflection and retain the desired direct path signal. The result is an improved and more accurate version of the pattern. In this presentation I review this technique as specifically applied to compact range antenna measurements, and apply it to several patterns, to demonstrate the method.

NOTES